



Regulation R20

Subject code: 3E1AI

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A+' Grade)

B.Tech I Semester Supplementary Examinations, January 2024**COMPUTER PROGRAMMING FOR PROBLEM SOLVING**

(Common for ME,ECE,CSE,CSE(AI&ML),CSE(DS) & IT)

Maximum Marks: 70

Date:27.01.2023 Duration: 3 hours

- Note:**
- 1.This question paper contains two parts A and B.
 2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
 3. Part B consists of 5 Units. Answer any one full question from each unit.
 4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks

10x2M=20Marks

CO

Bloom
Tx

1. Define an algorithm? What are the properties of an algorithm?
2. Define a variable along with syntax.
3. List out different storage classes?
4. List any two differences between while and do-while loop?
5. Define Data structure? Mention the names of different linear data structures?
6. Define a Pointer? Write the syntax for initialization of a pointer?
7. Define a string with a syntax.
8. Define a structure? Write the syntax for declaring a structure variable.
9. Define a FILE? What are the types of files?
10. List file error handling functions with syntaxes.

CO1

L1

CO1

L2

CO2

L1

CO2

L1

CO3

L1

CO3

L1

CO4

L1

CO4

L1

CO5

L1

CO5

L1

Part- B

Answer all the questions

5X10M = 50M

11. Explain different types of operators used in C language? [10m]
(OR)
12. Define do-while loop? Write a C program to display Fibonacci series using do-while loop. [10m]
13. Develop a C program that performs multiplication of two matrices. Hint: Use Arrays. [10m]
(OR)
14. Define a function. What are the different types of functions based on the arguments passed to it? [10m]
15. Write a short note on Call-by-reference. Develop a C program that swaps two numbers using pointers. [10m]
(OR)
16. What are the different String handling functions? Write a C program to insert substring into given main string from a given position. [10m]
17. What is meant by a structure? Define a structure named Employee and another structure named doj (data of joining) with members date, month, year as members, as the member of Employee structure. Develop a C program that read

CO1

L2

CO1

L2

CO2

L3

CO2

L2

CO3

L3

CO3

L3

CO4

L3

data into structure members using structure variables of Employee and doj structures. [10m]		
(OR)		
18. A) Explain about dynamic memory allocation. [5m] B) Write a C program to demonstrate Malloc() function. [10m]	CO4	L3
19. Develop a C Program that copies one file to another, replacing all lowercase characters with their uppercase equivalents. [10m]	CO5	L3
(OR)		
20. What are the different file I/O operations? And demonstrate them with an example program. [10m]	CO5	L2